

**AMENDMENTS TO THE SPECIFICATION:**

Page 2, 2<sup>nd</sup> full paragraph: delete in its entirety

Page 5, 1<sup>st</sup> paragraph:

FIG. 1a is a schematic representation of a prior art network 101 of computers A to Q. The computers A to Q are capable of maintaining the same number (four) of connections as others. This hierarchical network topology is known as a tree, and is formed by new nodes preferentially connecting to the node which has the lowest "height" in the tree and which has a free link. For example, core node (computer A) has "height"=0, then each computer linked to A has a height incremented by 1, for example computer B has "height"=1, computer F has "height"=2, etc. Any new node R (not shown) joining the network, for example by linking to computer F, would then have "height"=3. Later nodes joining the network would preferentially link to any of computers G to Q, rather than R, because they have a lower "height".

Page 10, 1<sup>st</sup> full paragraph:

FIG. 4 is a flow chart illustrating an algorithm for a centralised network management system for connecting nodes to build a FIG. 1b type network. In addition, the algorithm of FIG. 4 takes into account a further criteria, namely the maximum specified [[ranges]] ranges for nodes forming horizontal and vertical links. In any network

Fabrice T. P. SAFFRE  
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of the FIG. 1b type topology, opposing requirements for the lengths of the links need to be taken into account. On the one hand, short links lead to low deployment costs but a high average path length through the network, whilst on the other hand, long range links allow a low average path length but high deployment costs in terms of physical connections (i.e. a long underground cable, or particularly powerful transmitter for a wireless environment). This is particularly relevant in the case of the horizontal links since these are typically only very short-lived. Therefore, some compromise needs to be reached to satisfy the opposing requirements, and implemented by the network designers by ~~specifying~~ specifying maximum ranges for horizontal and vertical connections.